REMARKS

Claims 1-5 and 7-19 are pending in this application. By this Amendment, claim 1 is amended and claims 8-19 are added. Support for the amendments to claim 1 can be found, for example, in paragraph [0055] of the original specification. Support for the new claims can be found, for example, in the previously presented claims 1-5 and 7, and paragraphs [0038] and [0055] of the original specification. No new matter is added. Applicants respectfully request reconsideration and prompt allowance of the pending claims.

Applicants appreciate the courtesies shown to Applicants' representatives by Examiner Hendrickson during the July 28, 2009 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

The Office Action requests the proper spelling of inventor "Ooi." The correct spelling of the inventor's name is "Ooi" as evidenced by the Declaration filed February 5, 2004. Thus, no correction is required.

The Office Action rejects claims 1, 3, 5 and 7 under 35 U.S.C. §103(a) over U.S. Patent No. 3,638,399 (Walker) in view of U.S. Patent No. 5,466,645 (Hayden). Applicants respectfully traverse the rejection.

As discussed during the July 28, 2009 personal interview, Walker in view of Hayden do not disclose and would not have rendered obvious at least closing "most of pores of the activated carbon with a diameter less than 20 Å," as recited in claim 1.

Rather, Walker discloses a process for purifying acetylene-containing pyrolysis gases and regenerating activated carbon used in the purifying process (Abstract). Walker discloses removing polymer precursors and higher molecular weight compounds in hydrocarbon pyrolysis gas with activated carbon (Walker at col. 1, lines 24–28). Despite Walker disclosing that naphthalene present in the pyrolysis gas is removed by the activated carbon (Walker at col. 1, lines 39–41), Walker does not disclose closing most of a certain pore size

of the activated carbon using naphthalene nor any of the other disclosed organic compounds. Although Walker discloses that the activated carbon becomes saturated after a duration of time that a pyrolysis gas stream is passed through a column packed with the activated carbon (Walker at col. 1, lines 42–47), Walker does not disclose what pore size becomes saturated. Nor does Walker disclose that most of the pores of the activated carbon with diameters less than 20 Å are closed after desorption.

Rather, the focus of Walker's disclosure regarding the activated carbon is that the activated carbon is reactivated by various heat treatments (C2:L10-15). The heat treatments regenerate the activated carbon by opening the pores and do not close the pores of the activated carbon so that most pores with a diameter less than 20 Å are closed after desorbing the saturating compounds. Thus, Walker can not reasonably be considered to disclose closing "most of pores of the activated carbon with a diameter less than 20 Å," as recited in claim 1.

Importantly, the Office Action inherently concedes that Walker does not disclose closing the diameters of certain pores of the activated carbon because the Office Action does not specifically address where Walker discloses this recitation (*see In re Angstadt et al.*, 190 USPQ 214 (CCPA 1976) (requiring that all positively recited features of a claim must be addressed in an Office Action)). Rather than addressing the recited features, the Office Action merely asserts that "[n]o differences are seen in the carbon or the effect of the treatment" (Office Action, page 2). However, because the Office Action has failed to establish that Walker discloses "selectively [closing] most of pores of the activated carbon with a diameter less than 20 Å," the Office Action has failed to establish the required similarities to support the rejection, regardless of the differences.

Thus, Walker at least fails to disclose "desorbing the organic compound from the activated carbon by heating the organic compound and the activated carbon at a temperature

higher than the boiling point of the organic compound to selectively close most of pores of the activated carbon with a diameter less than 20 Å," as recited in claim 1.

Hayden does not cure the above deficiencies of Walker. Rather, Hayden merely discloses cooling nitrogen-treated carbonaceuous char in an inert gas but does not disclose closing pores of an activated carbon. Thus, claim 1 is allowable over Walker in view of Hayden.

Claims 3, 5 and 7 are also allowable over Walker in view of Hayden for at least the same reasons as claim 1, as well as the for the additional features the claims recite. Applicants respectfully request withdrawal of the rejection.

The Office Action rejects claims 1–5 under 35 U.S.C. §103(a) over Control of Micropores of Molecular Sieving Carbon by Impregnation of Hydrocarbons and Heat Treatment, Nakano et al. (Nakano) in view of Hayden. Applicants respectfully traverse the rejection.

As discussed during the July 28, 2009 personal interview, Nakano in view of Hayden do not disclose and would not have rendered obvious closing "most of pores of the activated carbon with a diameter less than 20 Å," as recited in claim 1.

Rather, Nakano discloses that a carbonaceous substrate is treated by evaporation in a treating oven with an inert gas comprising a hydrocarbon. Nakano's Table 1 lists various molecular sieving carbon (MSC) samples: MSC-XA, A, B, C, D and MSC-5A. Table 1 lists the properties of the various MSC samples, including a particle density and a range of the micropore sizes.

Sample A in Table 1 represents the untreated precursor of the MSC (*see* Nakano, page 2, last paragraph, and description in Table 1). Importantly the focus of Nakano is on micropores with diameters of $2.8\text{-}5\text{x}10^{-10}$ m (i.e., 2.8-5Å). During the interview, Examiner Hendrickson alleged that Nakano's Table 1 illustrates that Sample A has 94% of the examined

micropores have a diameter between 4-5 Å and 6% of the examined micropores have a diameter between 2.8-4 Å.

Nakano discloses that Samples B, C and D are made by subjecting the precursor of Sample A with various chemicals, including coaltar naphthalene, diphenyl naphthalene and fluorene naphthalene, respectively, at the temperatures and durations listed in Table 1. The micropore sizes of Samples B, C and D change so that approximately 90% of the examined micropores have a diameter between 2.8-4 Å, and approximately 10% of the examined micropores have a diameter between 4-5 Å, except for the slight variation of Sample D. Although Nakano may be alleged to disclose that most of the pores with a diameter of 4-5 Å are closed by the various treatment methods because only 10% of the examined micropores have a diameter between 4-5 Å after treatment, because Nakano does not disclose whether the samples have pores between 0-2.8 Å and 5-20 Å, Nakano can not reasonably disclose that most of pores of the activated carbon with a diameter less than 20 Å are closed.

Thus, Nakano does not disclose closing "most of pores of the activated carbon with a diameter less than 20 Å," as recited in claim 1. Because Hayden fails to cure Nakano's deficiency, claim 1 is allowable over Nakano in view of Hayden.

Claims 2-5 are also allowable over Nakano in view of Hayden for at least the same reasons as claim 1, as well as for the additional features the claims recite. Applicants respectfully request withdrawal of the rejection.

Because claim 14 recites closing "most of pores of the activated carbon with a diameter less than 20 Å," claim 14 is allowable over the applied references for at least the same reasons as claim 1. Because claims 15-19 depend from claim 14, claims 15-19 are also allowable for at least the same reasons as claim 14 as well as for the additional features the claims recite. Applicants respectfully request prompt allowance of claims 14-19.

As discussed during the interview, none of the applied references disclose mixing the activated carbon and the organic compound. Accordingly, none of the applied references disclose "adsorbing an organic compound onto an activated carbon by mixing the activated carbon and the organic compound to bring the organic compound into contact with the activated carbon," as recited in claim 8. Thus, claim 8 is allowable over the applied references. Claims 9-13 are also allowable for at least the same reasons as claim 8, as well as for the additional features the claims recite. Applicants respectfully request prompt allowance of claims 8-13.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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Attachment:
Petition for Extension of Time

Date: August 5, 2009

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